ABSTRACT OF THE DISCLOSURE

A stereo-observation system includes a stereo imaging unit which has at least two entrance pupils and an imaging means forming a first image for the left eye and a second image for the right eye which have parallax and a stereo display unit which has two image display means displaying two images formed by the stereo imaging unit. In this case, the stereo display unit is constructed so that an angle of vergence $\alpha 2$ is made by the line of sight of the left eye of the observer viewing the center of the first image displayed by the image display means with the line of sight of the right eye of the observer viewing the center of the second image displayed by the image display means, and the angle of vergence $\alpha 2$ satisfies the following condition:

$$(\alpha 1 - 2\tan^{-1}(d / 2L)) \times (w2 / w1) \times 0.83 \leq \alpha 2 \leq \{2\sin^{-1}(G / 2D) - (2\tan^{-1}(d / 2S) - \alpha 1) \times (w2 / w1)\} \times 1.2$$

where $\alpha 1$ is the angle of vergence (the inward angle) of the stereo imaging unit, d is a distance between the centers of the two entrance pupils of the stereo imaging unit, L is a distance from a far point of the depth of field of the stereo imaging unit to the entrance pupils of the stereo imaging unit, S is a distance from a near point of the depth of field of the stereo imaging unit to the entrance pupils of the stereo imaging unit, w1 is the field angle of the stereo imaging unit, w2 is the field angle of the stereo display unit, G is an interpupillary distance of the observer, and D is a distance from the pupil position of the observer to the observation image.